



GORE® Space Cables and Assemblies

Extend Product Life for High-Voltage Power Cables

Running cables in a spacecraft is time-consuming and difficult. GORE® High-Voltage Power Cables reduce the frequency of this task by providing a minimum of 10,000 hours of reliable performance at maximum voltage ratings — ratings that are based on years of test data recorded under actual operating conditions. Available as hook-up wire, ribbon cable, or round cable, GORE® High-Voltage Power Cables are specifically designed for applications that require high reliability for long periods of time, such as power supplies and amplifiers, traveling wave tubes, and high-voltage routing.

THE SCIENCE BEHIND THE CABLES

The key to the outstanding performance of GORE® High-Voltage Power Cables is the proprietary material used in the cable insulation — expanded polytetrafluoroethylene (ePTFE). Using this proprietary technology, Gore has developed a specialized Corona-Resistant PTFE (CR-PTFE). Gas molecules trapped inside the insulation can ionize and cause corona discharge when high voltages are applied, ultimately causing damage to the insulation, which in turn causes more gas molecules to ionize. This special CR-PTFE allows the gas molecules to escape through the membrane without damaging the insulation. Because PTFE fibers are chemically inert and thermally stable, GORE® High-Voltage Power Cables can be used even at cryogenic temperatures or as high as 300°C for short periods of time.

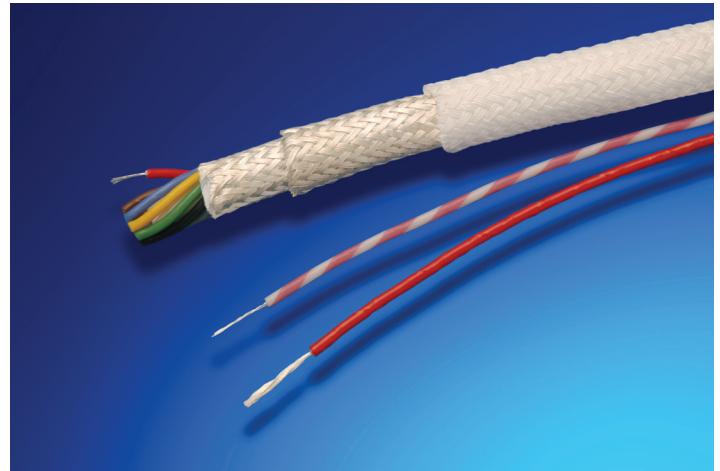
To protect against the excess gases that occur during ascent into orbit, an additional jacket made of microporous GORE-TEX® fibers can be added to the cables. This jacket allows gas molecules and air to flow completely out of the cable, thereby eliminating the possibility of damage to the cable.

TYPICAL USE

- Traveling wave tube

SAMPLE APPLICATIONS

- European Communications Satellite (ECS)
- Intelsat
- Hotbird
- SAX
- European Remote-Sensing Satellite (ERS)
- RADARSAT



Realize the Benefits of GORE® High-Voltage Power Cables

KEY FEATURES

- Corona-resistant (CR) PTFE insulation
- Chemically inert and non-flammable
- Highly resistant to electromechanical stress cracking
- Available in wide range of AWG sizes

Key Benefits

- Outstanding reliability in extreme environments
- Long-lasting life because of specialized insulation
- Reliable performance over wide range of temperatures
- Valued reliability delivered from an ESA-qualified and a DIN EN ISO 9001:2000-certified manufacturing facility
- Superior sales and technical support from Gore's worldwide engineering team



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TECHNICAL SPECIFICATIONS

All GORE® High-Voltage Power Cables meet the following technical specifications.

Property	Value
Operating temperature range	-200°C to +180°C
Maximum temperatures for short periods	Cryogenic to 300°C
Insulation	Corona-resistant (CR) PTFE
AC voltage range	4,000 V to 16,000 V
DC voltage range	9,000 V to 36,000 V
Conductor construction	Silver-plated, high-strength copper and copper alloy

GORE EXPERIENCE AND EXPERTISE

With approximately \$2.5 billion in annual sales and more than 8,000 employees around the world, W. L. Gore & Associates provides diverse, high-performance solutions in consumer, industrial, electronic, medical, and surgical markets. As well-known for its unique corporate culture as for its products, Gore's 50-year success story rests equally on product and organizational innovation. With a reputation for providing the highest-quality products, Gore is ready to assist in developing cost-effective solutions for your electronics applications.

NOTICE — USE RESTRICTIONS APPLY
Not for use in food, drug, cosmetic or medical device manufacturing, processing, or packaging operations.

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